
THE EIGHTH ANNUAL REPORT

of the

DEPARTMENT
of ANESTHESIOLOGY

1965



THE NEW YORK HOSPITAL-CORNELL MEDICAL CENTER
525 EAST 68TH STREET, NEW YORK, NEW YORK

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by JOSEPH F. ARTUSIO, JR., M.D.

To the President of the Board of Governors of the Society of The New York Hospital:

The year 1965 marked another milestone in the development of the Department of Anesthesiology in our institution. The senior staff and resident staff had increased to a sufficient size so that the last important step in the improvement of the care of the patient could be taken. It had been our goal for many years to provide uniform patient care throughout our institution. The last link in that endeavor was to provide around the clock anesthesia care by an Anesthesiologist to the obstetrical patient. The delay in completing this goal has been related to the manpower shortage in this specialty. We just have not been able to provide constant anesthesia care by a physician specialist, to the obstetrical patient. It now is possible to accomplish this final step in clinical care. Following many meetings by representatives of Anesthesiology and the Department of Obstetrics and Gynecology, details of this care were planned for our patients and at the end of this year this service began and will continue for the betterment of obstetrical patient care and the institution as a whole.

We should dwell for a moment on the problem of manpower in the specialty of Anesthesiology because it is critical to the national health. Private

and governmental funds have been available for anesthesia research and for research trainees but not available for clinical training in Anesthesiology. The National Societies of this specialty have had a most active program to attract a greater number of people into the specialty of Anesthesiology, but with an increasing demand for the services of the Anesthesiologist, the gap between supply and demand has widened. This great demand has come from an enlightened public who have begun to realize the importance of the individual who administers anesthesia. In spite of this great demand, the great bulk of medical students are attracted by the so-called glamorous branches of medical practice. Only a dedicated relative few become Anesthesiologists. It now appears eminent, that the Federal Government will begin to increase its support to this specialty, not only for research traineeships, but also for clinical training. The Federal Government has done this in the fields of Neurology and Psychiatry and has immeasurably helped these specialties. This added support, I am sure, will be a great benefit to Anesthesiology in its recruitment program.

During this year I was invited to be a visiting Professor at Temple Medical School in Philadelphia. Again I would like to stress how important I think the concept of the visiting Professor is to a Department. I am still looking for substantial funds to underwrite a program within this hospital. You remember last year that we gave many lectures in foreign countries of the world attempting to upgrade anesthesia in those areas. This year we confined ourselves to the territory of the United States giving lectures in Arizona, Pennsylvania, Washington, D. C., New Jersey, Tennessee, Missouri, Colorado and Connecticut.



SENIOR STAFF

My associates in the administration of this Department have been:

BENJAMIN E. MARBURY, M.D., Attending Anesthesiologist . . .	January 1949
MARJORIE J. TOPKINS, M.D., Associate Attending Anesthesiologist .	July 1952
ALAN VAN POZNAK, M.D., Associate Attending Anesthesiologist .	February 1958
HERBERT ERLANGER, M.D., Assistant Attending Anesthesiologist .	June 1957
GEORGE R. MONAHAN, M.D., Assistant Attending Anesthesiologist .	July 1960
JEROLD SCHWARTZ, M.D., Assistant Attending Anesthesiologist . .	October 1961
JEROME WEINROTH, M.D., Assistant Attending Anesthesiologist .	Dec. 1961-July 1965
ANN HUSTON, M.D., Assistant Attending Anesthesiologist . . .	January 1962
RAYMOND G. BARILE, M.D., Assistant Attending Anesthesiologist .	July 1963
LOUIS J. MAGGIO, M.D., Assistant Attending Anesthesiologist . .	July 1963
PATRICIA M. O'NEIL, M.D., Assistant Attending Anesthesiologist .	July 1963
BARNETT J. JUNKER, M.D., Assistant Attending Anesthesiologist .	October 1963
ALEXANDER GOTTA, M.D., Assistant Attending Anesthesiologist .	July 1964
DRAGAN BORAVAC, M.D., Assistant Attending Anesthesiologist . .	July 1964
PETER W. T. YU, M.D., Assistant Attending Anesthesiologist . .	July 1964
AILEEN KASS, M.D., Assistant Attending Anesthesiologist . . .	July 1965
DAVID SUSMAN, M.D., Assistant Attending Anesthesiologist . . .	July 1965

Once again the senior staff continues to grow. Dr. David Susman and Dr. Aileen Kass, both who completed their residency on June of 1965 joined our attending staff. This has increased our senior staff to 17 in number which means we have more than one senior Anesthesiologist for each resident trainee. Dr. Jerome Weinroth resigned this year to temporarily leave the specialty of Anesthesiology to work for the Federal Drug Administration. This should be an interesting change for Dr. Weinroth and he will be helping the general health program of our nation. Many more members of our senior staff are being invited to give lectures in various parts of our country and they now have an opportunity to attend many of the regional meetings in Anesthesia.



RESIDENT STAFF

Resident staff appointments in Anesthesiology for the year 1965 are as follows:

ANESTHESIOLOGIST (1)

MARY ELLEN COONEY, M.D.	July 1, 1963 to June 30, 1965
PARVANEH MODABER, M.D.	July 1, 1963 to June 30, 1965
DAVID SUSMAN, M.D.	July 1, 1963 to June 30, 1965
AILEEN KASS, M.D.	July 1, 1963 to June 30, 1965
LESLIE BALAZS, M.D.	September 1, 1964
ELIZABETH M. FROST, M.D.	July 1, 1964
MANON G. MANAHAN, M.D.	July 15, 1964
MICHAEL L. TESTA, M.D.	September 1, 1964 - November 1, 1965
JUDITH WEINGRAM, M.D.	July 1, 1964

ASSISTANT ANESTHESIOLOGIST (1)

GEORGE ALLGAIR, M.D.	July 1, 1965
JANET ALLGAIR, M.D.	July 1, 1965
ALEGRIA BAHIA, M.D.	July 1, 1965
MARY CHUA, M.D.	July 1, 1965
GABRIEL CURTIS, M.D.	July 1, 1965
NADINE HRADSKY, M.D.	July 1, 1965
CHENG-HOCK SEAH, M.D.	July 1, 1965 to December 31, 1965
YUNG JAI SOHN, M.D.	July 1, 1965

Graduate staff in training numbered 18 this year. On July 1, Dr. Mary Ellen Cooney completed her training and became an Attending Anesthesiologist at the Mountainside Hospital in Montclair. Dr. Parvaneh Modaber completed her training and returned to Iran briefly and is now a practicing Anesthesiologist

in Maryland. Dr. David Susman and Dr. Aileen Kass joined our Attending Staff here. This year eight new graduate staff members arrived for our training program. Dr. Janet Allgair from the Women's Medical College of Philadelphia, Dr. George Allgair from Temple University, Dr. Gabriel Curtis from the New York University Medical College, Dr. Yung Jai Sohn from Downstate Medical Center College of Medicine, Dr. Cheng-Hock Seah from the Royal College of Surgeons of Belfast, Dr. Nadine Hradsky from the University of Toronto, Dr. Alegria Bahia and Dr. Mary Chua from the University of Santo Tomas. Dr. C. H. Seah resigned his appointment on the graduate staff to return to the British Isles. This is the largest number of first year graduate staff members that we have accepted in our history, and they have progressed satisfactorily during the year.



NURSE ANESTHETISTS

MARJORIE J. TOPKINS,
M.D. in charge

Nurse anesthetists for the year 1965 are as follows:

SARA MULLIN, Senior Nurse Anesthetist	September 1932
JOSEPHINE CAHILL, Senior Nurse Anesthetist	November 1943
ETHEL KOVAR, Senior Nurse Anesthetist	November 1944
GRAYCE EVELETH, Staff Nurse Anesthetist	November 1935
CATHERINE LITZEN, Staff Nurse Anesthetist	April 1937 - Dec. 1965 Retired
ELIZABETH DAVIS, Staff Nurse Anesthetist	February 1958
MAUREEN MAXFIELD, Staff Nurse Anesthetist	February 1958
CONSUELA HANSEN, Staff Nurse Anesthetist	November 1958
BARBARA FRISCH, Staff Nurse Anesthetist	January 1961 - May 1965
CAROLE WHITE, Staff Nurse Anesthetist	March 1963
ELIZABETH HAMBLY, Staff Nurse Anesthetist	September 1963 - September 1965
GEORGETTE GABRIEL, Staff Nurse Anesthetist	August 1964
SORAYA AFCHARTOUSSE, Staff Nurse Anesthetist	September 1964 - January 1965
MARY KUCEWICZ, Staff Nurse Anesthetist	January 1965

During 1965 no major changes occurred in the composition of our nurse anesthetist group. A total of eleven nurse anesthetists were employed. Their services are utilized throughout the institution, assisting the anesthesiologist

and administering anesthesia. The large number of anesthetics administered in the clinic and in diagnostic areas of this institution makes the work of the nurse anesthetist most important.

On December 31, 1965, Miss Catherine Litzen retired after almost twenty-nine years at the New York Hospital. Miss Litzen came here immediately after completing her course in anesthesia at the Emory Hospital School for Nurse Anesthetists.

Her years of service were much appreciated by the Department. She was loved by all of us and she gave her time unselfishly. She dedicated her life's work to ease the pain of the surgical patient and her many kind words have relieved the anxiety of an uncountable number of patients in this hospital.

CLINICAL FUNCTIONS OF THE DEPARTMENT

BENJAMIN E. MARBURY,
M.D. in charge



Although the actual number of cases have been increasing each year for the last decade, this year there were 200 fewer general anesthetics administered than in previous years. It is difficult to say why the decrease occurred but it is distributed over the field of general, gynecological and obstetrical surgery.

Anesthesia for diagnostic procedures and treatments ever increases in the clinics and in the various diagnostic laboratories. The Nerve Block Clinic in particular under the direction of Dr. Alexander Gotta was expanded to make the facilities more readily available not only to out-patients but to in-patients. An interesting clinical research project is under way studying the effects of chemically induced sympathetic blockade in various diseased states. In con-

junction with Dr. Lieberman of the Vascular Disease Service of the Dept. of Medicine, Dr. Gotta and Dr. Judith Weingram of the graduate staff have been studying patients with sympathetic disorders or circulatory disturbances of the upper extremity and evaluate them in constant temperature rooms in the medical college prior to and following stellate ganglion block. Changes in skin temperature, blood flow and pulse waves are being studied. During 1965 a total of nine such blocks were performed on in-patients. This study will eventually give us some parameters in the efficacy of stellate ganglion blocks in these circulatory problems of the upper extremity.

The call for assistance for cardiac and respiratory resuscitation throughout the hospital continues with increasing demand and frequency. This consultative service to all departments throughout the hospital has led to an increasing number of requests by the staff for in-service teaching seminars relating to the techniques and equipment for resuscitation.

The many parameters of physiologic measurement monitored by electronic devices continues to play an important role in better patient care. This is particularly true in the case of the patient undergoing surgery where severe physiological trespass may be accomplished with a greater degree of safety for the patient.

RESIDENCY TRAINING

The residency training program continues to be very active and the training program based on the philosophy which I have expressed in previous annual reports. A tremendous amount of effort is involved in the training of the Anesthesiologist. There is a time for immediate close supervision and gradually a period of time where the supervision has to become more remote for the resident to gain confidence in his ability to control the anesthesia during a surgical operation. The need for constant consultation and questioning is important. Clinical anesthesia is learned at first by observation and then doing and imitating his teachers. The resident's period of study must be accomplished in a way that he from the very beginning practices his specialty in a dynamic kinetic manner, for his preparation must be such that he can meet any eventuality that may occur during a surgical procedure.

The knowledge must be inculcated that each patient varies in his physiological response. Constant diligence to individualize each patient is essential for good patient care. With this goal, the administration of anesthesia can never become a boring task because each administration is different and each patient has different sensitivity or resistance to drug action.

Massive stereotyped dose techniques are not taught. To accomplish single agent techniques, the graduate staff has to be limited to a few number of students, as it requires personal contact of the graduate students with the Professor of the Department. In larger programs it is more difficult for the departmental chairman to give personal direction to each individual in the graduate program. I hope that our graduate staff does not grow to the point where training is done completely by younger men of the department and no recourse is available to the older and more mature minds. It is important that the senior staff do not get so occupied with administration and their research activities that there is little contact with the young students.

MEDICAL STUDENTS

Our teaching of the medical students occurs in second, third and fourth years. We try to make these experiences with the Anesthesiologist interesting and informative. This year we have encouraged the fourth year students to take elective time in this specialty. We have received great enthusiastic support and I know that each of the medical students who have spent a month or two with us left here with a great deal of increased knowledge and a great insight into the function of the Anesthesiologist.

The American Society of Anesthesiologists has now provided us with a sum of \$25,000 in matching funds to support summer fellowships for students between their second and third year. This is really the only summer the student has to work or to further his education. We are going to partake in this summer fellowship program and from preliminary investigation it appears that the second year Cornell Medical Student desire this summer Preceptorship in greater numbers than we possibly could provide funds for. Under this program the summer preceptor would get \$600 for eight weeks of training in the clinical aspects of this discipline. His work would be guided by a single preceptor. Three hundred dollars of which will come from matching funds of the American Society and \$300 from the institution that provides the Preceptorship training. In some situations the Medical School or the hospital may provide the entire \$600 for the preceptor's stipend. This program is designed to give the student insight into acute and respiratory problems and inhalation therapy, cardio-circulatory resuscitation, pre and post-operative evaluation of patients in relationship to anesthesia, management of shock, of massive blood loss and replacement, the evaluation of vasopressors and hypotension, methods of blood volume determination, fluid and electrolyte and acid-base balance in anesthesia, the management of pain, the observation of

clinical nerve blocks, management of acute poisonings and the function of the Anesthesiologist in the emergency area.

It is through this effort that we hope to acquaint medical students with this specialty so that he may make an educated decision when the time arises to choose his life's work. Even if he never gives an anesthetic in the future, this training will provide him with great knowledge particularly in the field of resuscitation and care of the unconscious patient, which he will use in whatever field of medicine he practices. I hope next year to report on our results of the summer of 1966 because at this time we will have completed a group of these summer preceptors and we will be able to determine the value of this undertaking.

INSTRUMENTATION AND RESEARCH FUNCTION

ALAN VAN POZNAK,
M.D. in charge



Previous Annual Reports have mentioned the new anesthetic agent Tetrafluorobromethane (Teflurane) which had its laboratory development and first clinical trial at this institution. This agent presents many of the clinical features of cyclopropane, and in addition has the advantage of freedom from flammability or explosion hazard. Early clinical trial was suspended because of a suggestion of nephrotoxicity in one report, but further investigation has failed to corroborate this suggestion, and clinical trial at New York Hospital has been resumed.

However, like cyclopropane, Teflurane has the capacity to produce cardiac arrhythmias. The main interest in present clinical trial is the evaluation of the incidence and severity of these arrhythmias, and the development of a suitable technique for its clinical administration. Certain anti-arrhythmic drugs are under consideration either as premedicants or as treatments for arrhythmias

that may arise during the course of the anesthesia. If the attempt to control the arrhythmias is successful, it is our belief that Teflurane will merit a widespread clinical trial that could lead to its acceptance as an agent of great utility and importance.

Buried in the physiology literature is the little-known (and usually unimportant) fact that man produces a small amount of carbon monoxide. We became concerned with the possibility that cumulation to toxic levels might occur during prolonged anesthesia using a closed circle system, since in this situation excretion of carbon monoxide through the lungs would be followed by reabsorption. Results of an initial small study indicated that this was the case and also showed that any cause of hemolysis (such as blood transfusion or cardiopulmonary bypass) would increase the amount of carbon monoxide produced. This is in accordance with the fact that most of the endogenous carbon monoxide comes from the breakdown of hemoglobin. The main exogenous cause of carbon monoxide elevation is smoking prior to anesthesia.

Assembly of facilities for investigation of the neuromuscular effects of anesthetics has progressed slowly, but is now nearly complete. An excellent operating table together with its associated equipment has been built by Mr. Zweis and his associates in the apparatus shop. This apparatus, patterned after that used by Dr. Riker and Dr. Standaert in the Department of Pharmacology, includes a table with multiple T-slots and adjustable uprights for positioning the animal and various apparatus, which includes a rigidly mounted myograph column and strain gauge. Associated equipment includes Grass Stimulators, a Texas oscillographic recorder, a Tektronix dual beam oscilloscope, and a Grass oscilloscope camera. It is planned that the study of the effects of cyclopropane on the neuromuscular complex, begun in the Department of Pharmacology, will be completed and published in the near future.

RECORDS AND STATISTICS

Chart I

The number of total anesthetics decreased by approximately 200 this year. The popularity of the non-flammable inhalation anesthetics continues. Of the 16,000 general anesthetics done last year, 10,000 were done with a non-flammable technique. Cyclopropane remains the only popular explosive inhalation anesthetic that I believe will gradually be replaced with the non-explosive gas Teflurane which appears to be a useful clinical anesthetic. The number of local infiltration anesthesia used in this institution remains the same as in 1964.

Chart II

Two-thirds of all patients receive an intravenous barbiturate induction. It is interesting to note the use of the semi-closed circle CO₂ absorption technique continues to grow in popularity. We believe the reason for the increase in this type of technique is related to the high potency of the halogenated anesthetics which are safer to administer by this method rather than by the closed circle CO₂ absorption system. The open method insufflation techniques are only used for resident training. The use of the mechanical ventilator decreased considerably over the last few years with the return to manual ventilation. One-third of our inhalation anesthetics have endotracheal intubation and 50% of the patients receive a neuromuscular blocking agent during some part of their anesthetic course.

Chart III

Summary of cases by region shows the same overall distribution in the last few years.

Chart IV

The graduate students continue to do about one-quarter of the anesthetics administered. They have excellent experience in all types of anesthesia in every region of the body.

Chart V (a)

Shows nine cardiac arrests occurring in the operating room which were not related to open cardiac surgery. All cases were resuscitated immediately to cardiac function. Four of the nine were resuscitated with no sequelae. All these arrests occurred in patients above the age of twenty and only two were considered good anesthetic risks prior to the administration of anesthesia. Cardiac arrest occurring in these two individuals resulted in death in one and

complete recovery with no sequelae in the other. There was no common anesthetic agent or anesthetic technique associated with the cardiac arrest.

Chart V (b) — Myocardial Infarctions

Seventeen myocardial infarctions occurred during the operative period to the seventh post-operative day. Eight of these patients had either a previous myocardial infarction prior to this particular myocardial infarction or had serious angina or ST segment changes in their preanesthetic EKG. The overwhelming number of myocardial infarctions occurred on the second post-operative day. An occasional one on the first post-operative day and a rare one on the third post-operative day.

Chart V (b) — Cerebral Vascular Accidents

Vascular complications considered, occurred within seven post-operative days. Of the four cerebral vascular accidents, one succumbed to the vascular accident and the other three recovered. Only one of these gave a history of a previous cerebral vascular accident. They all occurred in patients in the third decade of life or older. Interesting enough two of them occurred following local infiltration anesthesia.

Chart V (c)

Pulmonary complications considered, occurred within four post-operative days. There were seventeen pneumonias and three deaths in this group. Of the patients with pneumonia who died, two had had pneumonectomy and the other patient had chronic pyelonephritis and severe emphysema. Bilateral tension pneumothorax occurred in one instance due to increased pressure in the airway in association with occlusion of the opening in the Slocum chieloplasty tube.

Department of Anesthesiology

General Surgery — GYN — Obstetrics

Cyclopropane	5,110	
Halothane	3,356	
Nitrous Oxide	3,246	
Penthrane	2,968	
Ether, semi-closed circle	1,019	
Ether, open	138	
Spinal	101	
Regional block for surgery	34	
Thiopental sodium, intravenous	23	
Epidural and caudal	10	
Vinethene	9	
Thiopental sodium, rectal	6	16,020

General anesthesia for
therapeutic procedures:

Thiopental sodium, electroshock	266	
Thiopental sodium, electroconversion	66	332
		<hr/> 16,352

Miscellaneous

Locals, O. R. for surgery	3,431	
Locals, clinic	434	
Blocks, O. R. and Clinic (therapeutic and diagnostic)	33	3,898
		<hr/> 20,250
Private patients	12,092	
Pavilion patients	8,158	20,250

Department of Anesthesiology

General Surgery — GYN — Obstetrics

<i>Methods of induction to primary anesthesia</i>		
Thiopental sodium induction	9,913	
Vinethene inductions	18	
Rectal thiopental sodium basal	14	
<i>Induction and maintenance with same anesthetic</i>		
Cyclopropane induction to Cyclopropane maintenance	342	
Ether induction to ether maintenance	181	
Nitrous Oxide induction to Nitrous Oxide maintenance	2,867	
Closed circle CO ₂ absorption technic	8,069	
Semi-closed circle CO ₂ absorption technic	7,761	
Open mask method	145	
Insufflation	2	
Infant circle CO ₂ absorption technic	326	
Mechanical ventilator	36	
Non-rebreathing valve	13	
<i>Special technics</i>		
Arfonad — controlled hypotension	36	
Cardio-pulmonary bypass	88	
Generalized hypothermia (tub or blanket)	291	
Local hypothermia (ice packs)	64	
<i>Endotracheal intubation</i>		
Nasoendotracheal	163	
Oroendotracheal	5,798	5,961
<i>Neuromuscular blocking agents</i>		
d'Tubocurarine only	156	
Succinylcholine only	6,377	
Both used	598	
Flaxedil only	66	7,197

CHART II—Annual Summary—Methods of Induction—Technics—Special Drugs

ANESTHESIOLOGY DEPARTMENT

Summary of cases — Includes General, Spinal and Block Anesthesia

Head and Neck

ENT (by region)	769
Eye	550
Dental	176
Face	150
Thyroid	170
Neck	150
Head, superficial	20
Intracranial	319
Esophagoscopy }	
Bronchoscopy }	68
	<hr/>
	2,372

Thorax

Great vessels	20
Mitral valvulotomy (closed)	27
Cardiac-Pulmonary bypass	84
Other heart surgery	46
Intrapleural	175
Thorax, superficial	472
Thoracic cage	6
Shoulder	22
Thoracic sympathectomy	1
	<hr/>
	853

Upper abdomen

Stomach-duodenum	223
Biliary tract	575
Retroperitoneal	53
Colon	357
Pancreas	16
Spleen	20
Renal	191
Portal	12
Close evisceration	7
	<hr/>
	1,454

Lower Abdomen

Appendix	237
Bowel, small	122
OB, vaginal delivery	3,700
GYN, abdominal surgery	712
Urology, abdominal	350
Caesarean section	230
Abdominal-perineal	40
Abdominal aorta & vessels	84
Ventral hernia	63
	<hr/>
	5,538

Abdominal wall

Extraperitoneal	5
Hernia, ing. fem. umb.	638
Lumbar sympathectomy	22
Abdomen, superficial	53
Burns, 10% body	5
	<hr/>
	723

Perineal

GU Perineal (TUR & Cysto)	1,348
Ano-rectal	221
Perineal GYN (D&C, etc.)	2,196
Vaginal hysterectomy	184
	<hr/>
	3,949

Spine

Column	105
Cord	25
Back, Pilonidal, etc.	86
	<hr/>
	216

Limbs

Upper bone	45
Upper soft	223
Lower bone	336
Lower soft	301
	<hr/>
	905

Grand total operations16,010
Grand total anesthetics16,020

Anesthesia — no operation 10

CHART III

ANESTHESIOLOGY DEPARTMENT

Summary of RESIDENT Anesthesiologists' Cases
Includes General, Spinal and Block Anesthesias*Head and Neck*

ENT (by region)	329
Eye	103
Dental	97
Face	19
Thyroid	52
Neck	41
Head, superficial	4
Intracranial	125
Esophagoscopy }	30
Bronchoscopy }	
<hr/>	
800	

Thorax

Great vessels	12
Mitral valvulotomy (closed)	24
Cardiac-pulmonary bypass	83
Other heart surgery	37
Intrapleural	74
Extrapleural	0
Thorax, superficial	83
Thoracic cage	2
Shoulder	3
<hr/>	
318	

Upper abdomen

Stomach-duodenum	90
Biliary tract	211
Retro-peritoneal	14
Colon	95
Pancreas	6
Spleen	7
Renal	74
Portal	4
Close evisceration	2
<hr/>	
503	

Lower abdomen

Appendix	97
Bowel, small	39
OB, vaginal delivery	457
GYN, abdominal surgery	158
Urology, abdominal	83
Caesarean section	74
Abdominal-perineal	19
Abdominal aorta & vessels	30
Ventral hernia	24
<hr/>	
981	

Abdominal wall

Extraperitoneal	1
Hernia, ing. fem. umb.	162
Lumbar sympathectomy	11
Abdomen, superficial	15
Burns, 10% body	2
<hr/>	
191	

Perineal

GU perineal (TUR & Cysto)	297
Ano-rectal	54
Perineal GYN (D&C, etc.)	357
Vaginal hysterectomy	67
<hr/>	
775	

Spine

Column	25
Cord	10
Back, pilonidal, etc.	29
<hr/>	
64	

Limbs

Upper bone	10
Upper soft	61
Lower bone	126
Lower soft	91
<hr/>	
288	

Grand total operations	3,920
Grand total anesthetics	3,925
Anesthesia — no operation	5

CHART IV

ANESTHESIOLOGY CLASSIFICATION OF COMPLICATIONS

<i>Age</i>	<i>Physical Status</i>	<i>Agent</i>	<i>Technic</i>	<i>Relaxant</i>	<i>Diagnosis Operation</i>	<i>Anes. Ind. to Arrest</i>	<i>Complication</i>	<i>Result</i>
27	2E	Cyclo	Closed Endotr.	Anectine Curare	Perforated duodenal ulcer Plication of duodenal ulcer	1 hr., 45 min.	Cardiac arrest O.R. coronaries 80% occluded at autopsy	Cardiac resus; Death 18th po.
57	1	Halothane	S. Closed Endotr.	Anectine	Carotid tumor, left Exc. Carotid body tumor, left	2 hrs.	Cardiac arrest O.R. Carotid sinus reflex	Success resus; no sequelae
36	1	Cyclo	Closed Endotr.	Anectine	Fibrocystic disease breast Hypothyroidism Exc. left breast mass	1 hr., 45 min.	Cardiac arrest R.R.	Cardiac resus. Death
39	2	Penthrane	Closed Endotr.	Anectine	Follicular ca. thyroid Rt. hemithyroidectomy	4 hrs.	Cardiac arrest O.R.	Cardiac resus. Death
74	3	Penthrane	Closed	....	ASCVD, aortic aneurysm Paraplegia 2° to chordoma Fracture right femur Jewett nailing right hip	2 hrs.	Cardiac arrest O.R.	Success resus; no sequelae
69	2	Ether	S. Closed Endotr.	Anectine	Severe asthma Stress incontinence E.U.A., vaginal hysterectomy	1 hr.	Cardiac arrest O.R.	Cardiac resus. Death
40	4	Ether	S. Closed Endotr.	Anectine Curare	Myelogenous leukemia with splenomegaly. Splenectomy	1 hr., 15 min.	Cardiac arrest O.R.	Cardiac resus. Death
69	3	Ether	S. Closed Endotr.	Anectine	Chromophobe adenoma (pituitary) EKG-ventric. conduction defect Started craniotomy	30 min.	Cardiac arrest O.R. (relative overdose anesthesia)	Success resus; no sequelae
76	5	Ether	S. Closed	Anectine	Ca. rt. breast. ASCVD, previous CVA.-EKG- bundle branch block Biopsy rt. breast	45 min.	Cardiac arrest O.R. (relative overdose anesthesia)	Success resus; no sequelae

CHART V (a) — Cardiac Arrests and Massage within immediate anesthesia period.

ANESTHESIOLOGY CLASSIFICATION OF COMPLICATIONS

<i>Age</i>	<i>Physical Status</i>	<i>Agent</i>	<i>Technic</i>	<i>Relaxant</i>	<i>Diagnosis Operation</i>	<i>Anes. Time</i>	<i>Complication</i>	<i>Result</i>
62	3	Cyclo	Closed Endotr.	Anectine	Previous history of MI Small bowel obstruction Lysis adhesions, small bowel resection.	3 hrs.	Myocardial infarct 1st po. day	Improved
61	2	Cyclo	Closed Endotr.	Anectine	Carcinomatosis, peritoneal Cystoscopy, insertion ureteral catheter Exploratory lap., omentectomy	2 hrs., 40 min.	Myocardial infarct 3rd po. day	Improved
74	3	Cyclo	Closed Endotr.	Anectine	ASCVD—Hx. old MI by EKG's Chronic cholecystitis Cholecystectomy	2 hrs.	Myocardial infarct during anesthesia	Improved
50	3	Cyclo	Closed Endotr.	Anectine	ASCVD,—Hx. angina preop. EKG's. ST segment & T wave abnormalities Chronic cholecystitis, cholelithiasis Cholecystectomy.	3 hrs.	Myocardial infarct 1st po. day	Improved
86	4E	Ether	S. Closed Endotr.	Curare	ASCVD, previous acute MI Stenosis splenic flexure and cholocutaneous fistula. Exp. lap., lysis adhesions, cecostomy	2 hrs., 40 min.	Myocardial infarct 2nd po. day	Death

CHART V (b) — Vascular Complications within 7 day post anesthesia period.

ANESTHESIOLOGY CLASSIFICATION OF COMPLICATIONS

<i>Age</i>	<i>Physical Status</i>	<i>Agent</i>	<i>Technic</i>	<i>Relaxant</i>	<i>Diagnosis Operation</i>	<i>Anes. Time</i>	<i>Complication</i>	<i>Result</i>
40	3	Cyclo	Closed Endotr.	Anectine	ASCVD. Ca. colon, rt., Ca. left upper pulmonary lobe. Bleeding duodenal ulcer. Pulmonary emphysema. Right hemicolectomy.	4 hrs., 25 min.	Myocardial infarct recovery room	Improved
43	2	Cyclo	Closed Endotr.	Anectine	Acute cholecystitis. Exogenous obesity Coronary artery disease. Cholecystectomy & drainage.	3 hrs.	Myocardial infarct 7th po. day	Improved
77	4E	Ether	S. Closed Endotr.	....	ASCVD, digitalized. CA colon, metast. Ileotransverse colostomy Small bowel resection	4 hrs., 40 min.	Myocardial infarct 1st po. day	Death
62	2	Cyclo	Closed Endotr.	Anectine	Hypertension, atrial tachycardia Acute cholangitis, choledocholithiasis with jaundice. Cholecystectomy & exp. CD	3 hrs., 35 min.	Myocardial infarct during anesthesia	Improved
51	3	Cyclo	Closed Endotr.	Anectine	Chr. pancreatitis & CD obstruction Chr. alcoholism CD exp., cholecystectomy and sphincterotomy.	4 hrs., 35 min.	Myocardial infarct 1st po. day	Improved

CHART V (b) — Vascular Complications within 7 day post anesthesia period.

ANESTHESIOLOGY CLASSIFICATION OF COMPLICATIONS

<i>Age</i>	<i>Physical Status</i>	<i>Agent</i>	<i>Technic</i>	<i>Relaxant</i>	<i>Diagnosis Operation</i>	<i>Anest. Time</i>	<i>Complication</i>	<i>Result</i>
54	2	Halothane	S. Closed Endotr.	Anectine	Hypertension, HCVD ϕ angina preop. Stone in right ureter Cystoscopy ϕ attempted removal stone	1 hr., 5 min.	Myocardial infarct 3rd po. day	Improved
78	2	Cyclo	Closed Endotr.	Anectine	Hypertension. ST segment abnormalities preop. by EKG's. Chr. bronchitis Subacute cholecystitis Cholecystectomy	4 hrs., 10 min.	Myocardial infarct 1st po. day	Death
64	2E	Halothane	S. Closed Endotr.	....	Hypertension. Comminuted open fracture radius & ulna. Closed reduction fractures	45 min.	Myocardial infarct 2nd po. day	Improved
70	4	Ether	S. Closed Endotr.	Anectine	ASCVD & hypertension. Hx old MI Chr. cholecystitis & cholelithiasis. No operation, severe drop BP during anesthesia induction.	20 min.	Myocardial infarct during anesthesia	Improved
72	3	Ether	S. Closed Endotr.	Anectine	Hx. MI x 2 1955. Hypertension 200/100. Abdominal aortic aneurysm. Resection abdominal aortic aneurysm.	7 hrs., 10 min.	Myocardial infarct 2nd po. day	Improved

CHART V (b) — Vascular Complications within 7 day post anesthesia period.

ANESTHESIOLOGY CLASSIFICATION OF COMPLICATIONS

<i>Age</i>	<i>Physical Status</i>	<i>Agent</i>	<i>Technic</i>	<i>Relaxant</i>	<i>Diagnosis Operation</i>	<i>Anest. Time</i>	<i>Complication</i>	<i>Result</i>
74	4E	Cyclo	Closed Endotr.	Anectine	ASCVD. Possible old MI Ca caecum & metastases, obstructive. Right colostomy.	1 hr., 40 min.	Myocardial infarct 3rd po. day	Death
60	3	Penthrane	Closed Endotr.	Anectine Flaxedil	HCVd—MI 1964. Ca left lung. Exploratory thoracotomy, left	4 hrs.	Myocardial infarct 2nd po. day	Death
78	4	Xylocaine Nitrous Oxide	Local S. Closed	....	Intertrochanteric fracture rt. hip ASCVD. Hypertension. Anemia & congestive heart failure. Old CVA & left hemiparesis. Open red., Jewett nailing rt. hip.	3 hrs., 10 min.	Cerebral thrombosis 6th po. day	Improved
79	3	Xylocaine	Local	....	Strangulated rt. femoral hernia ASCVD. Chr. cholecystitis Small bowel resection, repair rt. femoral hernia.	....	Cerebral thrombosis 3rd po. day	Improved
85	3	Penthrane	Closed	Anectine	Intertrochanteric fracture rt. femur. ASCVD. Jewett nailing right hip.	2 hrs., 30 min.	Cerebral thrombosis 5th po. day	Improved
54	3	Ether	Closed Endotr.	Anectine Curare	Carcinoma of the esophagus Interposition rt. colon into neck, appendectomy, gastrostomy.	6 hrs., 25 min.	Cerebral thrombosis 1st po. day	Death

CHART V (b) — Vascular complications within 7 day post post anesthesia period.

ANESTHESIOLOGY CLASSIFICATION OF COMPLICATIONS

<i>Age</i>	<i>Physical Status</i>	<i>Agent</i>	<i>Technic</i>	<i>Relaxant</i>	<i>Diagnosis Operation</i>	<i>Anes. Time</i>	<i>Complication</i>	<i>Result</i>
50	3	Ether	S. Closed Endotr.	Anectine	Gastric ulcer & chr. cholecystitis & Angina. Subtotal gastrectomy & cholecystectomy.	7 hrs., 25 min.	Atelectasis, RLL 1st po. day	Improved
59	1	Cyclo	Closed Endotr.	Anectine	Ca. rt. lung & hilar node metas. Right pneumonectomy	3 hrs., 40 min.	Bronchopneumonia left, 1st po day	Death
9	1	Ether	Open	....	Left hydrocele & ing. hernia, Hydrocelectomy & hernioplasty	1 hr., 50 min.	Aspiration pneumonia 1st po. day	Improved
34	2	Penthrane	Closed Endotr.	Anectine	Severe prognathus, non union jaw. Iliac bone graft to mandible	6 hrs., 15 min.	Pneumonia, RLL 1st po. day	Improved
47	2	Cyclo	Closed Endotr.	Anectine	Occlusion ext. iliac artery Thromboarterectomy ext. iliac artery	4 hrs.	Pneumonia, RLL 2nd po. day	Improved
87	3	Nitrous Oxide	S. Closed Endotr.	Anectine	Fracture right femur Closed reduction fract. rt. femur	1 hr., 45 min.	Pneumonia, RML 1st po. day	Improved
66	2	Ether	S. Closed Endotr.	Anectine	Recurrent gastric ulcer Subtotal gastrectomy and gastroduodenostomy.	1 hr., 40 min.	Pneumonia, LLL 2nd po. day	Improved
23	1E	Halothane	S. Closed Endotr.	Anectine	Acute appendicitis. Mes. adenitis. Exp. lap., appendectomy	3 hrs., 30 min.	Pneumonitis, RLL 3rd po. day	Improved

CHART V (c) --- Pulmonary complications within 4 day post anesthesia period.

ANESTHESIOLOGY CLASSIFICATION OF COMPLICATIONS

<i>Age</i>	<i>Physical Status</i>	<i>Agent</i>	<i>Technic</i>	<i>Relaxant</i>	<i>Diagnosis Operation</i>	<i>Anes. Time</i>	<i>Complication</i>	<i>Result</i>
15 mos.	1	Ether	S. Closed Endotr.	....	Complete cleft palate Repair cleft palate. Insertion chest tubes, bilateral	2 hrs. 50 min.	Tension pneumothorax bil. during anesthesia	Improved
35	2	Cyclo	Closed Endotr.	Anectine	Cholecystitis, cholelithiasis Cholecystectomy & liver biopsy	2 hrs., 15 min.	Pneumonitis, LLL 1st po. day	Improved
79	2	Ether	S. Closed Endotr.	Anectine	Obstructed duodenal ulcer Chr. cholecystitis & cholelithiasis. Gastroenterostomy, cholelithotomy & cholecystostomy.	2 hrs., 45 min.	Atelectasis LLL & pneumonitis, 3rd po. day	Improved
76	3	Ether	S. Closed Endotr.	Anectine	Acute cholecystitis. Asthma Cholecystectomy	2 hrs.	Lobar pneumonia 3rd po. day	Improved
7½	2E	Halothane	S. Closed Endotr.	Anectine	Mesenteric adenitis. Mild URI Appendectomy	1 hr., 40 min.	Lobar pneumonia 1st po. day	Improved
52	2E	Cyclo	Closed Endotr.	Anectine	Small bowel obstruction Lysis adhesions small bowel	1 hr., 10 min.	Pneumonia, RLL 2nd po. day	Improved
57	3	Halothane	S. Closed Endotr.	Anectine	Rt. ing. hernia, hydrocele, bilat. Chronic bronchitis Bil. hydrocelectomy, rt. hernioplasty	3 hrs., 40 min.	Pneumonitis, LLL 2nd po. day	Improved
64	1	Cyclo	Closed Endotr.	Anectine	Ca. rt. lung. Peptic ulcer Right pneumonectomy	3 hrs., 55 min.	Pneumonia, left 2nd po. day	Death
62	2	Penthrane	Closed Endotr.	....	Toxic nodular goiter. Chronic pyelonephritis. Hypertension chr. bronchitis & emphysema Subtotal thyroidectomy. Tracheostomy	4 hrs.	Pneumonia, LLL 2nd po. day	Death

CHART V (c) — Pulmonary complications within 4 day post anesthesia period.

CLOSING COMMENTS

The eighth year of a separate Department of Anesthesiology is now completed. We are progressing slowly but surely. Personnel in the department now numbers 35 physicians. The teaching and research continues to be of a high caliber and we will strive for improvement during 1966.

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